**Grade 7 – Final Exam Review Sheet**

**Chapter 9 – Cell Processes - section 2 only**

Vocabulary words: pg. 254.

1. Describe the function of a selectively permeable membrane
2. Explain how the processes of diffusion and osmosis move molecules in living cells.
3. Explain how passive transport and active transport differ.
4. Read the ***Summary*** on page 258..
5. Also read the ***Reviewing Main Ideas*** for section 2 on page 269.

**Chapter 13 - Circulation and Immunity**

Vocabulary words: pp. 366, 371, 377 and 381

1. Describe the functions of our blood.
2. Be able to name and describe the parts of the blood and provide a function for each.
3. What is hemoglobin? What is its function?
4. Be able to identify which types of blood someone with type A blood can receive in a transfusion and be able to identify to which types of blood they can provide blood in a transfusion.
5. Compare and contrast arteries, veins, and capillaries
6. Explain how blood moves through the heart
7. Identify the functions of the pulmonary and systemic circulation systems
8. Be able to define antigens, antibodies, and pathogens
9. Explain the difference between an antigen and an antibody
10. Compare and contrast active and passive immunity
11. Be able to describe the 4 stages of an “attack” on foreign substances that enter our body, by our immune system.
12. Be able to discuss the contributions of the following scientists to our knowledge of immunity and diseases: Robert Koch, Louis Pasteur, and Joseph Lister.
13. What is a vaccine?
14. What is pasteurization?
15. Describe the difference between infectious and noninfectious diseases and provide common examples.
16. Read the ***Summary*** on pages 370, 376, 380 and 388
17. Also read the ***Reviewing Main Ideas*** on page 393

**Chapter 14 – Digestion, Respiration and Excretion**

Vocabulary words: pp. 400, 412, and 419

1. Distinguish the differences between mechanical and chemical digestion
2. Identify the organs of the digestive system and what takes place in each.
3. Explain how homeostasis is maintained in digestion.
4. Describe the functions of the respiratory system.
5. Explain how oxygen and carbon dioxide are exchanged in the lungs and in the cells.
6. Identify the pathway of air in and out of the lungs.
7. Distinguish between the excretory system and the urinary system.
8. Describe how the kidneys work
9. Explain what happens when urinary organs don’t work.
10. Read the ***Summary*** on pages 404, 418, and 423
11. Also read the ***Reviewing Main Ideas*** – sections 1, 3 and 4 on page 427

**FINAL EXAM - PART 2**

**Chapter 15 – Support and Movement**

Vocabulary words: pp. 434 and 439

1. Distinguish between the epidermis and dermis of the skin.
2. Identify the functions of the skin.
3. Explain how skin protects the body from disease and how it heals itself.
4. Identify the major function of the muscular system.
5. Compare and contrast the three types of muscles.
6. Explain how muscle action results in the movement of body parts.
7. Read the ***Summary*** on pages 404, 418, and 423
8. Also read the ***Reviewing Main Ideas*** – sections 1, 3 and 4 on page 427

***Questions from the first half of year. Only major concepts will be presented***

**Chapter 8 – Life’s Structure and Classification**

Vocabulary words: pp. 218 and 221

1. Identify what living things need to survive
2. Explain the system of ***binomial nomenclature***
3. Be able to use a dichotomous key to classify an organism.
4. Describe the development of the Cell Theory
5. Identify names and function of each part of the cell.
6. Explain how important a nucleus is in a cell
7. Compare tissues, organs, and organ systems
8. Read the ***Summary*** on pages 220 and 230.
9. Also read the ***Reviewing Main Ideas*** for sections 1 -3 on page 239

**Metric**  **System** **Handouts:**

1. Identify the numerical value of the following prefixes: kilo-; centi- and milli-
2. Be able to convert: grams to kilograms; millimeter to kilometer; kilogram to milligram; and other combinations
3. Identify the SI units of:
   1. **Length** – meter (base unit); kilometer, centimeter and millimeter.
   2. **Volume** – liter (base unit); milliliter and cubic centimeter (cm3)
   3. **Mass** – gram (base unit); kilogram, centigram and milligram
4. Identify the methods by which these measurements are taken: (Meter stick, Graduated cylinder, Triple-beam balance)

***Chapter 1 – The Nature of Science – pp. 6-18***

1. Explain the steps taken in scientific methods.
2. Distinguish between ***observations*** and ***inferences***.
3. Compare and contrast scientific ***variables*** and ***constants***
4. Explain how a ***control*** is used during an experiment
5. Read and study the ***Summary*** items on pages 11 and 18
6. Read and study the ***Reviewing Main Ideas*** section on page 23.

**Use your handouts for Simple Machines**

**Refer to your notes.**

1. Distinguish between the different types of simple machines and describe the uses.
2. Machines are devices that make work easier.
3. A simple machine is a machine that does work with only one motion.
4. The six simple machines are the pulley, lever, wheel and axle, inclined plane, wedge, and screw. Describe the advantage each provides when doing work.

**Electricity – Use your notes and handouts**

1. Describe how electric charges exert forces one each other.
2. Explain how objects can become electrically charged.
3. Describe how an electric current flows
4. Explain how electrical energy is transferred to a circuit.
5. Distinguish between ***series*** and ***parallel*** circuits.
6. Describe how magnets exert forces on each other.
7. Describe how objects become temporary magnets.